DOCUMENT RESUME

ED 252 727 CE 040 560

AUTHOR Crosby, Richard K.
TITLE Developing Positive Attitudes in T & I and Technical Programs.
PUB DATE Dec 84
NOTE 26p.; Paper presented at the American Vocational Association Convention (New Orleans, LA, December 1984).
PUB TYPE Viewpoints (120) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Attitude Change; Attitude Measures; Comparative Analysis; Disabilities; *Disadvantaged; Guidelines; Postsecondary Education; Secondary Education; Student Evaluation; Teacher Education; Teacher Role; *Technical Education; *Trade and Industrial Education; *Work Attitudes
IDENTIFIERS Affective Work Competencies Inventory; Regional Surveys; *Special Needs Students

ABSTRACT

A study examined the work attitudes of a sample of trade, industrial, and technical education students from one postsecondary and three secondary institutions in Jefferson County, Kentucky, including the city of Louisville. More than 1,300 students participated, including 796 who were characterized as disadvantaged, 226 as disabled, and 350 as unclassified. Students represented 35 programs, including welding, cosmetology, auto mechanics, industrial electricity, industrial electronics, and radio-TV. The Affective Work Competencies Inventory developed by Kazanas and Beach was used to measure 15 affective competencies or work attitudes of the students in the sample. Significant deviations from mean scores for the groups of all three groups of students were found for 9 of the 15 clusters examined. Disabled students varied consistently negatively from the mean and their scores were more negative on all listed clusters than were those of either of the other two subpopulations. At each grade level examined (grade 11, grade 12, and the postsecondary level, significant differences in the mean scores of the unclassified and the special needs students were found to exist for at least one of the clusters examined. Based on these findings, a procedure for helping special needs students develop good work attitudes was proposed. Recommendations were also made concerning the inclusion of a core course on attitudinal development in teacher education programs. (MN)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED252727

Developing Positive Attitudes in T & I and Technical Programs

Richard K. Crosby, Ed.D.

University of Louisville

Running Head: DEVELOPING POSITIVE ATTITUDES

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

✓ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

R Crosby

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

ED405660

DEVELOPING POSITIVE ATTITUDES IN T & I AND TECHNICAL PROGRAMS

Positive attitudes towards work are very important to the success of business and industry. In the early 1900's, Prosser and Allen (1925) discussed this influence and said, ". . . human attitudes toward employments are and will remain the dominant factor in economic production" (p. 56). In more modern times, the focus of work attitudes seems to be on the worker's ability to display attitudes necessary to succeed on the job. This is illustrated by the statement of Beach, Kazanas, and Smith (1982) when they stated: "Affective work competencies (the socio-psychological characteristics such as work values, habits, and attitudes) have become primary considerations for workers at all stages of their employment: entering the job market, sustaining employment and gaining job promotions" (p. 27).

For many years, training to develop work attitudes has been linked with skill development. This is accomplished by creating a work place atmosphere in the training program. The teacher reacts to educational situations similarly to how a foreman would react in business and industry. In the process, the teacher strives to build confidence and pride in students which, hopefully, results in ambitious activity leading to retention of work-related tasks.

During the past decade, business and industry have been actively discussing outcomes when employees lack positive attitudes (see Miller & Usoro, 1981). This has resulted in statements to T & I and

technical educators such as, "send us graduates with good attitudes and we'll provide the skill training." It might appear to some that this means skill training is not as important as it was in the past. However, it can be assumed that business and industry still hire skilled graduates, yet workers are wanted whose positive attitudes match their levels of skill development. Perhaps the input from business and industry should be viewed as a signal that more emphasis should be placed on attitude development in I & I and technical education programs.

Trade, Industrial, and Technical Students

Since the 1963 Vocational Act, there has been a tremendous expansion of T & I and technical education. More schools have been built within the reach of the majority of the population, allowing students to choose from a wide spectrum of training offerings. Students may train for a variety of jobs that represent different skill levels, responsibilities, and time needed to train for employment. This has resulted in a large student population with a variety of skills, abilities, and backgrounds that may or may not enhance success in training.

As vocational education has expanded, teachers have expressed concerns about students who seem to have difficulties in profiting from instruction. This has lead to questions such as: Are students learning enough to help them succeed in employment? Are they retaining learnings needed to obtain and hold jobs? Are the

instructional techniques sufficient to maximize learning for all students? These questions apply to all types of learning, including attitudes. It is recognized that attitudes are important to long-term success on the job. They are also a key element in job interview success, as well as meeting probationary requirements during the first few months of employment.

To provide maximum assistance to all students, it is necessary to identify students who have characteristics that may require more attention in the instructional process. One identifiable group consists of those who are classified as special needs students. This classification describes the disadvantaged and/or handicapped as defined in public law 94-482 (1976). To be disadvantaged, a student must be economically and/or academically (reading, writing, and/or math) handicapped. A handicapped student is one that has a handicapping condition that requires special education assistance (section 195).

Along with a lack of basic skills, a number of special needs students may have problems with understanding the concept of work and how the training program curriculum is related to this concept. Furthermore, they may not be used to cooperative relationships, such as those needed in the workplace, and might not understand the importance of appearance and good grooming (Malowney, 1983). These factors imply it is important to provide this group of students with more than skill training. They may need additional assistance and

creative learning techniques to adjust their attitudes to take advantage of the training program, which in turn will prepare them for the world of work.

It must be assumed that a number of other students in T & I and technical programs have characteristics similar to some special needs students (see Sullivan, 1984). There are a number of students who have difficulties in reading, writing, and/or math. Some have a lack of knowledge or a distorted view of the world of work. Others have poor work attitudes when they enter into training programs. The teacher must work with all students to overcome deficiencies and build on positive aspects of their characteristics. However, great care must be taken to give special attention to those with special problems.

In a recent report from the U.S. Office of Education (Miller, 1983), it was reported that there were over 650,000 trade, industrial, and technical students in the United States meeting the definitions of special needs students (about 20% of the student population). More recently, Crosby (1983) studied trade, industrial, and technical students in 4 schools in an urban area of Kentucky. Eighty-eight percent of 983 secondary students were classified as special needs students, along with 64% of 389 post-secondary students. It can be concluded that special needs students probably make up a large percentage of the student population in T & I and technical education programs nationally, and

larger percentages of the student population in urban areas.

A Study with Implications

A case has been made in the literature and this paper to consider special needs students. However, the question arises as to the capabilities of this group to obtain and retain work attitudes with the present instructional techniques. The study mentioned above by Crosby (1983) may have implications for desicion-making in this area of concern.

The Population

The study focused on levels of work attitudes of a population of trade, industrial, and technical education students. Jefferson County, Kentucky was selected as the area for study. The county included the city of Louisville and had a population of approximately one million persons. Using a cluster sampling approach, 2 of 7 secondary area vocational schools, 1 of 2 secondary vocational rehabilitation centers and 1 post-secondary school were selected. All available students on a given day in each of the 4 selected schools participated in the study. Over 1,300 students from 35 different programs participated in the study. The largest number of students were enrolled in welding (139), followed by cosmetology (115), and auto mechanics (85). There were a number of programs with a smaller number of responses, such as industrial electricity (23), industrial electronics (39), and radio-tv (31).

The Instrument

The affective work competencies inventory (AWCI) developed by Kazanas and Beach (1978) was used in the study. The inventory is a 95 item instrument describing 15 affective competencies (work attitudes). These competencies were:

1. AMBITIOUS
2. COOPERATIVE/HELPFUL
3. ADAPTABLE/RESOURCEFUL
4. INDEPENDENT/INITIATING
5. ACCURATE/QUALITY OF WORK
6. PLEASANT/FRIENDLY/CHEERFUL
7. RESPONSIVE/FOLLOW DIRECTIONS
8. CAREFUL/ALERT/PERCEPTIVE
9. CONSIDERATE/COURTEOUS
10. EMOTIONALLY STABLE/JUDGEMENTAL/POISED
11. PERSERVERING/PATIENT/ENDURING/TOLERANT
12. NEAT/ORDERLY/PERSONAL APPEARANCE/MANNER
13. DEPENDABLE/PUNCTUAL/RELIABLE/RESPONSIBLE
14. EFFICIENT/QUANTITY OF WORK/ACHIEVING/SPEEDY
15. DEDICATED/DEVOTED/HONEST/LOYAL/CONSCIENTIOUS

The 7-scale, Likert-type instrument has been used in many studies involving vocational education and business and industry. Internal consistency of the instrument was high, as reliability

coefficients for each of the clusters and the instrument ranged from .75 to .95.

Findings

Analysis of variance at the .05 level of confidence was used to determine significant differences of levels of work attitudes between selected groups. The SPSS option of multiple classification analysis was used to provide additional information.

Insert Table 1 here

In Table 1, deviations from mean scores for the groups of unclassified, disadvantaged, and handicapped were shown for 9 out of 15 cluster scores that were significantly different. Several findings were apparent from the Table. Handicapped students varied consistently negative from the mean. In addition, their scores were more negative than any other classification of students on all listed clusters. Unclassified students scored more positively than the other two student classifications for all of the 9 clusters.

Insert Table 2 here

Results in Table 2 reflect significant differences between special needs students (disadvantaged and handicapped) and unclassified students at different educational levels. For each

coefficients for each of the clusters and the instrument ranged from .75 to .95.

Findings

Analysis of variance at the .05 level of confidence was used to determine significant differences of levels of work attitudes between selected groups. The SPSS option of multiple classification analysis was used to provide additional information.

Insert Table 1 here

In Table 1, deviations from mean scores for the groups of unclassified, disadvantaged, and handicapped were shown for 9 out of 15 cluster scores that were significantly different. Several findings were apparent from the Table. Handicapped students varied consistently negative from the mean. In addition, their scores were more negative than any other classification of students on all listed clusters. Unclassified students scored more positively than the other two student classifications for all of the 9 clusters.

Insert Table 2 here

Results in Table 2 reflect significant differences between special needs students (disadvantaged and handicapped) and unclassified students at different educational levels. For each

grade level, there was a significant difference in mean scores between the two student classifications for at least one of the clusters.

Discussion of the Study

There were no significant differences of scores between the disadvantaged, handicapped, and unclassified groups for 6 of the 15 clusters. When reviewing the 6 clusters, it appears that some of the clusters are closely related to the teaching of skills. Being adaptable, accurate, neat, and efficient are necessary to accomplish a variety of skills to work standards. This may be an indication that work-experienced teachers are having an impact on the work attitudes of all three groups through the present instructional delivery system.

It was important to note that there were significant differences in the scores between the three groups for 9 of 15 clusters. Also, the consistent ordering of unclassified--highest, disadvantaged, next highest--and handicapped--lowest, was worth noting. It may be necessary to provide additional instruction to the handicapped, followed by disadvantaged students and unclassified students.

Although it was convenient and informational to group students in the three groups, one must recognize that students within each of the groups have diverse characteristics that may enhance or hinder the development of positive work attitudes. The teacher may identify groups, but great care must be taken to evaluate every

student to identify those who have learning difficulties.

In the study, unclassified and special needs students at the three educational levels scored significantly different on at least one cluster, and the clusters were different for the different grade levels. These results indicate that instruction may have to vary for different grade levels.

Offering a Course to Emphasize Work Attitudes

Teacher Acting and Reacting

Since the beginning of vocational education, instructors have been the translator for students to understand what work is all about, and how one can obtain and succeed in employment. The expansion and changing nature of training has not eliminated this responsibility. The teacher is still the prime force in helping students to profit from instruction to the degree that they enter into the world of work with appropriate attitudes.

The trade, industrial, or technical teacher is the role model for students. For several hours a day, students observe the teacher demonstrating abilities to accomplish work-related tasks to a high level of skill. The time factor, combined with the teacher acting in an appropriate manner, tends to build a bridge of respect between teacher and student. The teacher must take advantage of this situation to develop the work attitudes of students.

There are a number of ways for the teacher to act and react to learning situations. Perhaps a thought the teacher should keep in

mind is a "Golden Rule" for teaching work attitudes. This rule states: "The teacher should act the same as you would expect the student to act in a work situation." Appropriate dress is important; following rules and regulations of the school is necessary; being organized in all aspects of the instructional program is appropriate; promoting the occupation is a must; and conducting oneself like the most respected worker in the occupation is desirable. All of these, and other actions by the teacher, illustrate to students that. "This is the way it is on the job, and I am showing you how successful workers act."

A Procedure for Developing Attitudes

There is other information about work attitudes that is necessary to consider before devising instructional strategies. One important factor has been well established: Workers in different occupations have different patterns of work attitudes. One of the most convincing studies was one done by Beach, et al. (1982). They surveyed some 9000 scores for workers in 22 occupations. There were significant differences, and this allowed the development of work attitude patterns for 22 occupations. This finding means that teachers in different instructional areas must focus on different attitudes. There may be commonalities from program to program, but each instructor must work to develop appropriate instruction based on job titles selected as the focus of instruction.

Teachers must take into consideration what is known about work

attitudes before developing an instructional plan. Information such as presented in this paper and other relevant factors should be known and evaluated before trying to devise appropriate strategies. Once this is accomplished, a step by step procedure may be used to take advantage of these findings. Following is a procedure a teacher could use to maximize work attitude retention for students.

The first step is to make a listing of work attitudes. Many teachers can visualize from their own experiences what is meant by work attitudes, but they have difficulty in verbalizing the attitudes (Crosby, 1983). There are many listings of attitudes that can be found in articles, ERIC, and other publications (see Beach, et al., 1982; Kazanas, 1978; Petty, 1983). A teacher should develop a complete list that represents what workers in their occupation need to exhibit to be successful.

Once a listing of attitudes is developed, priorities should be established. In a previous discussion, it was noted that workers in different occupations have different profiles of work attitudes. Teachers could review information from this source (Beach, et al., 1982), along with using their background experiences to decide on the importance of each identified attitude.

The next step is to include attitude development in instruction. The teacher decides where each attitude can be addressed. If the teacher decides that - helping others to work together - and - helping others when they need help - are two important attitude components, activities in the shop or lab can be

designed to include group activity. Then the teacher ensures that supervision of students includes working with the groups and individuals within the groups to foster cooperation and help among its members. Attitude development can and should occur in many aspects of instruction. Attitudes, and the reasoning behind them, should be included in "key points" of lessons, as lesson performance objectives, as an integral part of instructional management, and in carrying out an effective lab/shop management system. In this step, the goal of the teacher is to decide on an overall instructional plan that includes addressing every important attitude component.

Once attitudes are identified and planning is completed for delivery, the teacher must be sure that every student is aware of attitudes needed to succeed as a worker. One successful technique is to discuss important attitudes with students so they understand why particular attitudes are needed to obtain and hold a job (Crosby, 1983; Petty & Morgan, 1980). This is followed by the teacher continuously mentioning important attitudes throughout the program and relating attitudes to all skill and knowledge activities. Once students are aware that certain attitudes are expected, the teacher can proceed without surprising students about actions taken in regard to certain student attitudes.

Implementing a plan to develop attitudes is a challenge. A teacher must know the characteristics of students when they enter the program, and build upon the knowledge through careful observation and evaluation. As this is occurring, determinations

should be made of what can be done to help each student build upon strengths and eliminate weaknesses. This requires teachers to: stress certain attitudes that need to be improved; point out when attitude adjustments need to be made; and, verbalize approval when attitude development is progressing. For those who require additional help, such as special needs students, role modeling, praise, encouragement, rewarding for accomplishments, and other accepted techniques are useful.

Once students are aware of what is expected of them, there should be evaluations of how they are matching up to attitudinal standards. Of course, there is constant feedback as the teacher assists students to accomplish tasks to industrial standards that consider attitudes. Along with this, there should be one-on-one discussions to assess individual progress in striving towards appropriate levels of attitudes. The student should be made aware of: the attitudes under consideration; how the teacher rated the student and why; the importance of the attitudes to succeed in industry; and how to act in the future to improve or maintain levels of attitudes. These evaluations should take place frequently and be carried over into all phases of instruction so the student accepts attitudinal development as an overriding influence on the successful completion of all tasks in the program.

Other positive outcomes may be derived from formally surveying attitudes of students and using the results to design educational strategies. An example of such a program is as follows: students

would complete the AWCI (15 clusters of work attitudes). After scoring the inventory, the teacher would:

1. Compare a student's score with how the teacher rated the student. This would give the teacher an idea of the student's self-concept of work attitudes. From this, strategies could be developed to increase the student's self-concept, or, if necessary, ways could be devised to help the student make a more realistic assessment of work attitudes.
2. Compare a student's score with other students' scores. This allows the teacher to determine how a student stands in relation to other students in the program. This could indicate that the student needs more assistance, or is at an appropriate level.
3. Assess whether or not a student is making appropriate progress toward matching the work attitude levels of workers in the occupational area. This can be accomplished by using data furnished with the instrument (if available), or by projecting what is necessary from teacher experiences and/or business and industry input. Interpretation of scores in this manner may result in new or modified learning strategies for the student.
4. Help students assess their levels of work attitudes. It may be helpful to use a graph to show each student how his/her scores compare to the average scores of students in

the program, or workers in the occupation. This can be followed by discussion and recommendations to a student about appropriate actions to be taken.

5. Display information about the group of students in a manner that would assist in evaluating instruction. A teacher could compare the average scores of students to scores of students in like programs, or to scores from previous testing efforts. This information would help determine the effectiveness of instruction in developing work attitudes.

Teacher Education Responsibility

It is well established that work attitudes are as important as other aspects of an instructional program. Therefore, teacher education programs should place emphasis on attitudinal development the same as for other aspects of the instructional program. Following are examples of what an undergraduate teacher education program could include in a core program:

Foundation Courses. These courses should emphasize the need to include attitudinal development in the curriculum. Students completing the course should understand the importance of developing attitudes in a work-related program, and be able to find and select statements that represent important attitudes for their occupational areas. This course could also include what is known about attitude development and how this information applies to what a teacher must do in an instructional program.

Curriculum Development Courses. Attitude development should be held in the same priority as skill and knowledge development. Students should be taught to: identify appropriate attitudes needed to accomplish work-related tasks; break down instruction into steps that include attitudinal development; develop instruction that includes attitudinal information and attitude-related tasks; and develop attitude-related performance objectives and evaluation to measure attitudes. Development of attitudes should be considered when developing curriculum, such as instruction sheets, modules, and plans for group instruction.

Methods Courses. Developing lesson plans and strategies for an instructional program should include attitudinal development. This should be supplemented by teaching exercises to exhibit teaching skills, including expertise in working with students to improve attitudes. Teachers should learn to be flexible in delivering instruction so they can use alternate techniques when students are not behaving appropriately. Working with special needs students during presentation, application, and testing steps should be stressed. Instruction related to measuring work attitudes should include formal and informal measurement, evaluation, and ways to communicate results to motivate students.

Shop Management Courses. Managing students in a manner that enhances work attitude development should be emphasized and considered in: equipment selection and placement; safety; student personnel systems; managing task activity and progress; and other activities related to managing the shop.

Other courses in the undergraduate and graduate programs should include attitude development as an integral part of developing, managing, and administering a T & I and technical program. The content should relate from course to course so developing attitudes in a program occurs as an accepted progression of offering relevant instruction. Also, the content should enhance cooperation between educators at all levels. Developing attitudes should evolve into a cooperative effort between administrators, teachers, and business and industry.

Service conducted by a teacher education department is essential to helping teachers offer an effective training program. As administrators and teachers strive to apply class learnings to practical situations, teacher educators need to be available. This can occur through visitations, consultations, communications, workshops, independent studies, and other activities that are deemed necessary. The key to this aspect of attitude development is developing a team effort with all members of the educational community so problems can be quickly identified and solved.

Research is usually a responsibility of teacher education units. There is much research that needs to be done in the area of work attitudes. The following suggestions are presented:

1. Conduct research to explore the work attitudes of trade, industrial and technical students at different points in their training.
2. More information needs to be obtained about the group of

special needs students and their capabilities to attain appropriate work attitudes in a variety of learning situations.

3. Initiate studies to find out the effectiveness of different teaching methods in developing work attitudes.
4. Investigate work competency levels of students at different points in training from 11th to 12th through post-secondary education.
5. Continue to identify characteristics of the student population, and find out capabilities of the population to retain work attitudes.

Conclusion

During the discussion in this paper there were some conclusions made about T & I and technical education in relation to work attitudes needed to succeed in the world of work. Accepting some or all of the conclusions could change the way in which we now deliver and evaluate programs. Following are some of the more important points of the discussion:

1. Positive attitudes are important to succeed at work!
2. Business, industry, and educators are concerned about the attitudes of potential workers, including T & I and technical graduates!
3. The teaching of work attitudes is accomplished primarily by the "Role Modeling" of the teacher!
4. The teaching of work attitudes needs to be more structured than it is now!

5. Special needs students are enrolling in T & I and technical programs in significant numbers and need special assistance to succeed!
6. There is information available about work attitudes in relation to the learning process!
7. It is possible to develop a system to enhance the learning of work attitudes!
8. The learning of positive work attitudes is a cooperative effort between student, teacher, administrator, and business and industry.

Everyone interested in T & I and technical education has the responsibility to become involved in developing programs to be responsive to students and business and industry. This requires all of us to do a better job within our particular areas of responsibilities, to be sure program instruction reflects attitudes needed to obtain, hold, and succeed in employment. We need to be more effecitve in: identifying attitudes that need to be developed; devising strategies for including them in programs; and working together to implement plans. Only through a concerted effort by everyone can T & I and Technical Programs reach its potential in training the nation's workers.

References

Beach, D. P., Kazanas, H. C., & Smith, T. R. (1982). Development and possible uses of an inventory of affective worker competencies. Journal of Industrial Teacher Education, 20(1), 27-40.

Crosby, R. K. (1983). Final report, improving affective competencies of special needs students in an urban vocational education setting. Louisville: University of Louisville.

Kazanas, H. C. (1978). Affective work competencies for vocational education, (Information Series no. 138). Ohio State University, Columbus, Ohio: The National Center for Research in Vocational Education. (ERIC Clearning House on Adult, Career, and Vocational Education).

Kazanas, H. C., & Beach, D. P. (1978). Affective work competencies for vocational education: summary interim report. University of Missouri Columbia.

Malowney, C. L. (1983). Module L-12, prepare exceptional students for employability. Columbus, Ohio: The Ohio State University, The National Center for Research in Vocational Education. (ERIC Document Reproduction Service no. ED 234 261).

Miller, R. L. (1983). Trade and industrial education tips (A summary of the Secretary's Annual Report to Congress). Washington, D.C.: U.S. Department of Education.

Miller, W. R., & Usoro, H. S. (1981). Affective work competencies as perceived by secondary vocational-insudrtial and post-secondary industrial-technical students and expected by potential employers. Journal of Industrial Education, 18(3), 35-42.

Petty, G. C. (1983). Affective work competencies of workers and supervisors from metalworking, building and construction, and maintencance/repair industries. Journal of Industrial Education, 21(1), 28-36.

Petty, G. C., & Morgan, L. (1980). Summary final report, Teaching work habits and attitudes (13). Columbia, Missouri: University of Missiouri-Columbia.

Prosser, C. A., Allen, C. R. (1925). Vocational education in a democracy. New York: The Century Company.

Sullivan, R. L. (1984). A comparative analysis of male-female work values in an experimental work values study. Journal of Industrial Teacher Education, 21(3), 43-56.

Table 1

A Multiple Classification Analysis of Significant AWCI Mean Scores of Student Groups

Cluster (Initial Descriptor)	Grand Mean Score	Deviations from the Grand Mean		
		Unclassified (N = 350)	Disadvantaged (N = 796)	Handicapped (N = 226)
Ambitious	56.3	1.42	-.05	-2.03
Independent	25.3	.85	-.27	-.36
Responsive	34.9	.37	.05	-.75
Careful	45.5	.68	.20	-1.75
Considerate	34.3	.54	.17	-1.44
Emotionally Stable	32.7	.56	-.02	-.79
Persevering	28.3	.36	.04	-.71
Dependable	33.	1.03	-.14	-1.09
Dedicated	54.8	1.05	.06	-1.83

Table 2

Significant AWCI Cluster Mean Scores Between Student Groups at Different Educational Levels

Educational Level	Cluster (Initial Descriptor)	Groups: Special Needs N	Special Needs Mean	Special Needs S.D.	Groups: Unclassified N	Unclassified Mean	Unclassified S.D.	F Ratio
11th Grade	Neat	433	43.8	7.7	133	42.2	7.7	4.5
	Dependable	433	32.5	5.5	133	34.5	5.0	14.3
12th Grade	Ambitious	337	53.7	8.4	80	56.1	6.9	5.4
Post-Secondary	Independent	252	27.1	4.6	137	28.1	4.3	4.3